NOAA Teacher at Sea
Mike Laird
Onboard NOAA Ship RAINIER
July 24 - August 13, 2005

Log 12

Day 15: Monday, August 8

Time: 13:00
Latitude: 55° 53.3' N
Longitude: 158° 50.5' W
Visibility: 10 nautical miles (nm)
Wind Direction: 230°
Wind Speed: 13kts
Sea Wave Height: 0-1'
Swell Wave Height: 0-1'
Sea Water Temperature: 12.8° C
Sea Level Pressure: 1027.2 mb
Cloud Cover: Sky 0/8 covered

Science and Technology Log

Today is probably the last day that I will be out on a launch, because tomorrow we will be running some survey lines using the ship's sonar. The launch I am assigned to (RA-2) is going out to collect bottom samples. Bottom samples are primarily used to sample the ocean floor in areas that have been identified as potential anchor sites. The information from the samples will be used to determine the locations of "good" anchor sites (sites that will provide a catch for the anchor, so it won't just slide around). These good anchor sites will then be included in the nautical information available for the area around Mitrofania.

A tool called a, clamshell sediment sampler, is used to retrieve the floor samples. The clamshell is a metal tool about a foot-and-a-half long, weighing between ten and twenty pounds. It has a rounded head, really a set of spring-loaded jaws, mounted to a shaft that is seated on a circular metal plate (picture one half of a Q-tip that's been cut in half with the cardboard shaft glued to an M&M and you'll get an of what the sampler looks like). The plate end of the tool is secured to a line and dropped head first over the side of the launch. When the sampler hits the seafloor, a lever activates the metal jaws (which were cocked open prior to the drop), they snap shut, and bingo a bottom sample. On the launch, the line is threaded through an electronic pulley system and the sample is raised to the surface. Most of the time this technique works well; however, sometimes the jaws fail to close, or they pinch shut on a rock allowing the sample to stream out on the way to the surface. In these cases, the procedure must be repeated.

Back on the launch, the sampler's jaws are pried open and the contents are examined, and finally a record (including notations on the floor sample contents, latitude and longitude, and water depth) is created for the site. Once this is completed, the sampler is rinsed out, the boat moves to the next location, and the process is repeated. Our team worked twenty-one sample sites and found some (not much) variety in our samples (shells only; shells and gravel; shells and silt; shells, silt and gravel; mud and gravel; and rock – determined after two casts returned with a closed, empty sampler).

Personal Log

Today an unusual event - a bear sighting! The launch was moving to a new cast location when the coxswain, Carl, spotted three dots moving along a distant shoreline. A closer look with the binoculars confirmed that the dots were bears (a sow and her two cubs). The trio jogged along the shore as the cubs darted in and out of the surf frolicking and generally having a good time. We eventually got too close and momma decided to head inland to the safety of the thick undergrowth. Very cool!